ACC NR: AR6027514 SOURCE CODE: UR/0137/66/000/004/I078/I079

AUTHOR: Meleshko, V. I.; Kachaylov, A. P.

TITLE: Effect of cold working and temperature on the mechanical properties of Kh18N10T steel

SOURCE: Ref. zh. Metallurgiya, Abs. 4I529

REF SOURCE: Nauchn. tr. In-t chern. metallurgii Gos. kom-ta po chern. i tsvetn. metallurgii pri Gosplane SSSR, v. 21, 1965, 310-313

TOPIC TAGS: cold working, stainless steel, mechanical property, plasticity, metal deformation / Kh18N10T steel

TRANSLATION: Samples were prepared from stainless steel quenched after hot-rolling and pickled. The thickness of the original samples varied within the range 3.8-3.9 mm. The samples were cold rolled. The testing temperatures were 0, 100, 200, 300 and 400°C. The amounts of deformation during rolling were 0.8, 13, 20, 40, 70 and 75%. With increase of temperature, $\sigma_{0.2}$ and σ_b decreased. The decrease of $\sigma_{0.2}$ was practically independent of preliminary deformation. When the temperature was raised to 100°C, the decrease in $\sigma_{0.2}$ was 5-7% for samples of nondeformed steel, while for samples deformed 7% in compression, it was about 8-9%. At 400°C, the decrease was respectively

UDC: 669.15.018.8

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ACC NR: AR6027514

25-27 and 21-23%. With increase in the degree of deformation, strength increased for all testing temperatures. The plasticity of the steel was lowered with a rise in the amount of preliminary deformation, as well as with an increase in testing temperature. V. Olenicheva.

SUB CODE: 11,13

Card 2/2

SINAYEV, Aleksey Nikolayevich; MELESHKO, V.K., red.; VLASOVA, N.A., tekhn. red.

[Electronic systems of multichannel nuclear particle spectrometers] Elektronnye sistemy mnogokanal'nykh spektrometrov iaderny[illegible] chastits. Moskva, Gosatomizdat, 1962. 94 p. (MIRA 15:10)

(Spectrometer)

MIKHEYEV, G.F., kand. tekhn. nauk; FEYTEL'MAN, N.G., kand. ekon. nauk; MELESHKO, V.K., red.; MAZEL', Ye.I., tekhn. red.

[Method for determining the economic efficiency of utilizing atomic energy in the national economy] Metodika opredeleniia ekonomicheskoi effektivnosti ispol'zovaniia atomnoi energii v narodnom khoziaistve. Moskva, Gosatomizdat, 1963. 53 p. (MIRA 16:12)

1. Akademiya nauk SSSR. Institut ekonomiki.
(Atomic energy--Economic aspects)

KOSHELEV, Ivan Vasil'yevich; MELESHKO, V.K., red.; POPOVA, S.M., tekhn. red.

[Radiometric apparatus for dressing uranium ores] Radiometricheskaia apparatura dlia obogashcheniia uranovykh rud. Moskva, Gosatomizdat, 1963. 91 p. (MIRA 16:8)
(Uranium ores) (Radiometer)
(Ore dressing—Equipment and supplies)

BELOV, A.F.; BELOUS, A.L.; KUZNETSOV, K.F.; KUROCHKIN, S.S.; SALICHKO, V.N.; MELESHKO, V.K., red.; POPOVA, S.M., tekhn. red.

[Digital system (AI-2048) for storing and processing information] TSifrovaia sistema nakopleniia i obrabotki informatsii (AI-2048). Moskva, Gosatomizdat, 1963. 145 p. (MIRA 16:9)

(Information storage and retrieval systems)

GORN, L.S.; KRASHENINNIKOV, I.S.; KHAZANOV, B.I.; MELESHKO, V.K., red.; VLASOVA, N.A., tekhn. red.

[Electronics in nuclear spectrometry]Elektronika v spektrometrii iadernykh izluchenii. [By]L.S.Gorn, I.S.Krasheninnikov, B.I. Khazanov. Moskva, Gosatomizdat, 1963. 291 p. (MIRA 16:3)
(Nuclear counters) (Spectrometry)

LUK'YANOV, Valeriy Borisovich; MELESHKO, V.K., red.; VLASOVA, N.A., tekhn. red.

[Measurement and identification of beta-radioactive preparations] Izmerenie i identifikatsiia beta-radioaktivnykh preparatov. Moskva, Gosatomizdat, 1963. 166 p. (MIRA 16:10)
(Beta rays) (Radioactive substances)

BABICHENKO, S.I.; BOGDANOV, A.A.; GORN, L.S.; KAGAN, M.L.; KRYLOV, L.N.; OL'DEKOP, L.G.; KHAZANOV, B.I.; MELESHKO, V.K., red.; DRUZHININA, L.V., tekhn. red.; POPOVA, S.M., tekhn. red.

[Radiometric process instrumentation] Kontrol'no-izmeritel'naia radiometricheskaia apparatura. [By] S.I.Babichenko i dr. Moskva, Gosatomizdat, 1963. 148 p. (MIRA 16:12)
(Radiometry)

VOROB'YEV, Grigoriy Abramovich, doktor fiz.-matem. nauk prof.; MESYATS, Gennadiy Andreyevich. Prinimali uchastiye: USOV, Yu.P.; KREMNEV, V.V.; MELESHKO, V.K., red.; MAZEL', Ye.I., tekhn. red.

[Technique for generating high-voltage pulses] Tekhnika formirovaniia vysokovol'tnykh impul'sov. Moskva, Gosatomizdat, 1963. 166 p. (MIRA 17:1)
(Pulse techniques (Electronics))

IVANOV, Viktor Ivanovich; KONSTANTINOV, Igor' Yevgen'yevich; MASHKOVICH, Vadim Pavlovich; KELNSHKO, V.K., red.

[Collection of problems on dosimetry and protection from ionizing radiations] Sbornik zadach po dozimetrii i zashchite ot ioniziruiushchikh izluchenii. Moskva, Atomizdat, 1964. 134 p. (MIRA 17:9)

ABAGYAN, L.P.; BAZAZYANTS, N.O.; BONDARENKO, I.I.; NIKOLAYEV, M.N.; MELESHKO, V.K., red.

[Group constants for the design of nuclear reactors] Gruppovye konstanty dlia raschota iadernykh reaktorov. Moskva, Atomizizdat, 1964. 138 p. (MIRA 17:5)

KALIKHMAN, Leonid Yefimovich; MELESHKO, V.K., red.

[Elements of magnetodynamics of gases] Elementy magnitnoi gazodinamiki. Moskva, Atomizdat, 1964. 422 p. (MIRA 16:1)

MATALIN, L.A.; CHUBAROV, S.I.; IVANOV, A.A.; MELESHKO, V.K., red.; VLASOVA, I.A., tekhn. red.

[Multichannel pulse analyzers in nuclear physics] Mnogokanal'nye analizatory iadernoi fiziki. Moskva, Atomizdat, 1964. 226 p. (MIRA 17:3)

GORN, L.S.; KHAZANOV, B.I.; MELESHKO, V.K., red.

[Radiation intensity recorders] Registratory intensivnosti izluchenii. Moskva, Atomizdat, 1965. 301 p. (MIRA 18:4)

YEGOROV, I.M.; ZHERNOV, V.S.; LAZAREV, A.F.; PEROV, N.L.; TIMOFEYEV, A.A.; MATVEYEV, V.V., doktor tekhn. nauk, red.; KHAZANOV, B.I., kand. tekhn. nauk, red.; MELESHKO, V.K., red.

[Apparatus for recording and studying ionizing radiations; reference book] Apparatura dlia registratsii i issledovaniia ioniziruiushchikh izluchenii; spravochnik. Moskva, Atomizdat, 1965. 429 p. (MIRA 18:7)

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S/133/61/000/001/007/016
A054/A033

18.5100

AUTHORS: Chekmarev, A.P., Member of the Academy of Sciences USSR; Saf'yan, M.M., Candidate of Technical Sciences; Meleshko, V.M., Candidate of Technical Sciences; Soroko, L.N., Engineer; Kholodnyy, V.P., Engineer

TITLE: Heating the Finishing Stand Rolls of Wide Strip Mills

PERIODICAL: Stal', 1961, No. 1, pp. 43 - 46

TEXT: The frequent breakdowns of rolls in continuous and semi-continuous strip mills are a serious drawback for the increasing productivity of these machines. Breakdowns are mainly due to thermal stresses caused by the non-uniform heating of the rolls. Tests carried out to investigate this problem showed that the heat stresses depend largely on the degree of reduction, the temperature and the length of the strip and the speed of rolling. The thin surface layer of the rolls suddenly becomes heated to up to 102°C, when the strip enters and suddenly cools down when the strip leaves the roll. To eliminate the thermal stresses due to sudden temperature changes, the rate of rolling on the finishing stand in the Zavod Zaporozhstal' (Zaporozhstal' Plant) in the beginning of the working period

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Heating the Finishing Stand Rolls of Wide Strip Mills

is decreased, e.g., the 1,680 mm stand of this plant produces 200 tons in the first hour after the rolls have been changed instead of 400 tons. In order to prevent heat stresses in the rolls and thus to eliminate production losses, the present article suggests the rolls to be preheated before operation to the temperature which corresponds to the normal rolling temperature on the particular stand. For this purpose an inductor has been designed, composed of three coiled cores, two of which are mounted under the roll, the third above it. The inductor is a-c fed (50 cps, 380 v). The rolls, the ball bearings and supports are connected with this device. In the working rolls of the finishing stand holes were drilled in which thermocouples (three pairs per roll) were fitted. The test results are plotted in Figures 4, 5, 6 and 7, and it was established that six pairs of the continuous finishing stand rolls could be preheated effectively, according to the following scheme. Four h before they are mounted on the stand the rolls of stands VIII - IX, then the rolls of stand VI and VII and finally those of stand V and X should be preheated by the inductor described. The heated rolls have to be wrapped in flannel and stored on shelves, so that the temperature will be distributed in them evenly, before they are mounted on the stand. The time available is 3 h for the rolls of stand VIII - IX, 2 h for those of stand VI - VII and 1 h for the rolls of stand V. The rolls of stand X, whose working tem-

Heating the Finishing Stand Rolls of Wide Strip Mills

perature is lower than that of the others, are heated only for 25 min and they are rolled over every 12 min. The temperature equalization takes 1.5 h in these rolls. By using a device for rotating the rolls slowly in the inductor, heating can be made more uniform. With preheated rolls mounted on the stand no special "heating up" period for the finishing stand process was necessary and the stands could operate at full capacity after the preheated rolls were mounted. There are 7 figures and 5 references: 1 Soviet and 4 non-Soviet .

ASSOCIATIONS: Institut chernoy metallurgii AN UkrSSR (Institute of Ferrous Metallurgy of the Academy of Sciences UkrSSR); Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute); zavod "Zaporozhstal'" ("Zaporozhstal' Plant)

CHIKIN, G.A.; MELESHKO, V.P.; KLEYMAN, M.B.; POLISHCHUK, F.M.

Experimental unit for refinery juice purification by means of anion exchange resins. Sakh.prom. 38 no.2:25-31 F '64. (MIRA 17:3)

1. Voronezhskiy gosudarstvennyy universitet (for Chikin, Meleshko).
2. Krasnopresnenskiy sakharo-rafinadnyy zavod im. Mantulina (for Kleyman, Polishchuk).

MELESHKO, V.P.

Presentation of the gold medal of the Royal Geographical Society of Great Britain to M.M.Somov. Inform. biul. Sov. antark. eksp. no.30:32 '61. (MIRA 14:12)

(Somov M.M.)
(Royal Geographical Society, London)

MELESHKO, V.P.; NAZO, A.A.

New method of purification of water from ammonia. Gig. sanit., Moskva No.1:53-54 Jan 52. (CLML 21:4)

1. Of the Sanitary-Hygienic Laboratory of Southeastern Railroad.

Meleshko, V.P.

Determination of the concentration of salt solutions with the aid of cationic filters. V. P. Meleshko and A. I. Ozerova. *Trudy Voronezh. Univ.* 33, [illegible] (1954); *Referat. Zhur., Khim.* 1955, No. 9622.—A soln. of a nonhydrolyzing salt 0.005–0.01*N* was passed through a filter contg. 5 g. of cationite in H form at the rate of 5 cc. per min. The filter was washed with water, and the combined filtrate and wash-water titrated with an alk. soln.; the concn. of the salt being detd. by the titer. The relative error was 0.12 mmoles. M. Hosch

MELESHKO, V.P.

The regeneration of ion-exchange filters. V. P. Meleshko and A. A. Mazoc. *Trudy Voronezh. Univ.* 32, [illegible] *Referat. Zhur., Khim.* 1956, No. 1633.—The kinetics of Cu^{++} removal from ion-exchange resins (sulfo-phenolics [illegible] and KU-1, the type SBS contg. only SO_3H active groups, sulfonated coal, and sulfophenolic resin prepd. in the lab.) is studied by use of acid with different concns. The curves of removal [illegible]

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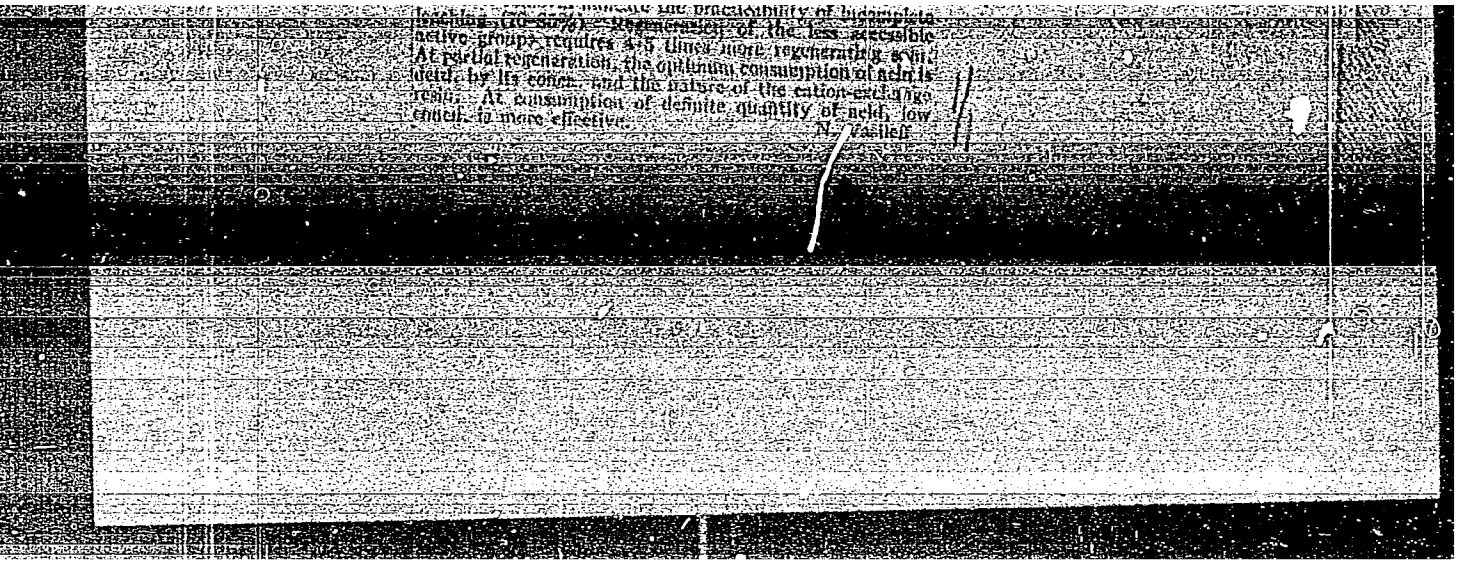

MELESHKO, V.P.

Ion exchange on cationite resins. V. P. Meleshko (State Univ., Voronezh). *Trudy Komissii Anal. Khim., Akad. Nauk S.S.S.R., Inst. Geokhim. i Anal. Khim.* 6, 206-17(1955).—A sulfophenol resin (SF) was studied. A method for chromatographic detn. of Fe in bronze is suggested. Within limits, increasing the height of the cationite layer increases the area between the 2 sorption yield curves, e.g., between the curves for $RH + Na^+$ and $RNa + H^+$. This area increases as the bonds between absorbed ion and resin become weaker. Affinity series for SF is: $Li^+ < H^+ \leq Na^+ < K^+$. Reactions of SF with Mg^{++}, Ca^{++}, and Ba^{++} are not completely reversible; the ion-resin bonds are simpler. On light-colored SF, Fe^{+++} gives a bluish black zone, Cr^{+++} a gray, Cu^{++} a yellow-green, and Ag^+ and Hg^{++} (after time for reduction to metal) dark, glossy zones. Both HSO_3 and OH groups take part in the Fe color. The color is destroyed at pH<2. Solns. contg. 100 mg. Cu^{++} and 0.034-0.170 mg. Fe^{+++} were passed through a column (8 × 0.8 cm.) of SF in Cu form. The height of the black zone was not strictly proportional to the Fe content. For quant. work the zone height must be compared with the zone heights obtained from standard Fe solns. Analogous results were obtained when $AlCl_3$-$FeCl_3$ solns. were passed through SF in Al form. For Fe detn. in bronze (Cu 84.8, Fe 0.2%) dissolve 0.1 g. in 7.5*N* HNO_3. Evap. the soln. to remove excess acid. Dissolve the residue in H_2O, filter, and neutralize the filtrate with NH_4OH until turbidity appears. Dissolve the ppt. with 1 drop of acid. Pass this soln. through a column of SF in Cu form. Compare the height of the black zone with zones prepd. from standard Fe solns. Fe in H_2O might be detd. on SF. Kyrill Mayerle

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MELESHKO, V. P.

USSR/Chemistry - Physical chemistry

Card 1/1 Pub. 22 - 30/54

Authors : Meleshko, V. P., and Voytovich, V. B.

Title : Relation between ion distribution in a filtering layer of chromatographic piles and the form of output curves

Periodical : Dok. AN SSSR 102/5, 965-968, Jun 11, 1955

Abstract : An investigation was conducted to determine the relation between the nature of ion distribution in a filtering layer of an ionite chromatographic pile and the form of output curves obtained during the concentration of diluted solutions. The problem was solved by calculating the interchange of two ions of uniform valence and interchange constant. The results obtained are given. Five USSR references: (1948-1953). Tables; graphs.

Institution : The Voronezh State University

Presented by : Academician A. N. Frumkin, November 17, 1954

Meleshko, V.P.

USSR /Chemical Technology. Chemical Products and Their Application
Water treatment. Sewage water. H-5

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1711

Author : Meleshko V.P., Chervinskaya O.V., Romanov M.N.

Title : The Use of Anionite Resins EDE-10 and AN-2F for Thorough Desalination of Water.

Orig Pub: Teploenergetika, 1956, No 12, 20-23

Abstract: An experimental comparison has been made, under laboratory conditions, of the anionites TM, AN-2F, PE-9 and EDE-10 to determine their suitability for producing desalinated water required for the technological needs of the radio plant. The experiments revealed the superiority of EDE-10 anionite. On 2-stage, separate H-OH ionation (with Espatit KU-1 as cathionite and EDE-10

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USSR /Chemical Technology. Chemical Products and Their Application
Water treatment. Sewage water.

H-5

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1711

as anionite), a water was obtained the specific resistance of which was of the order of $5 \cdot 10^6$ - $6 \cdot 10^6$ ohms. Expenditures of alkali and wash water in conjunction with the use of anionites AN-2F and EDE-10 have been determined.

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MELESHKO, V.P.

USSR/Physical Chemistry - Surface Phenomena. Adsorption. B-13
Chromatography. Ion Exchange

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 4015

Author : Meleshko V.P.
Inst : Voronezh University
Title : Sulphophenol Cathionite for Chromatographic Analysis

Orig Pub : Tr. Voronezhsk. un-ta, 1956, 42, No 2, 67-68

Abstract : Description of the procedure of synthesizing a cathion-exchange resin that is light colored and permits visual observation of movement of chromatographic zones of various cathions, aither directly or with the use of reagents that produce color reactions with the cathions being separated. To a 40% aqueous solution of formaldehyde (I) is added melted phenol sulfonic acid (II) at a temperature 25°. The molar ratio of I:II = 1.5:1. On slight heating the mixture thickens, after which it is removed, cut into small pieces and treated with 3-5%

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MELESHKO, V. P.

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(Swelling of ion-exchange resins and the nature of their selectivity. V. P. Meleshko and O. N. Myasnikov (State Univ., Voronezh). *Kolloid. Zhur.* 19, 681-8(1957).—The grain of SDV-3 resin (a sulfonated copolymer of styrene and divinylbenzene) was measured in a microscope in various flowing chloride solns. The equil. vol. V decreased from Li resin to H resin: Na > Be > K ≈ Mg > NH_4 > Ca > Sr > Ba resin; and the ratio of the extreme V values (i.e. Li to Ba) was 1.04. The V was a linear function of the ionic radius in crystals, of the hydrodynamic ionic radius, and of the energy of hydration of the ions, but the univalent and the bivalent ions gave 2 different lines. When the concn. c of the flowing salt soln. increased, the V decreased (by about 2% when c rose from 0.01 to 4N) but the order of cations remained unchanged. When the grain was equilibrated with a soln. of 2 chlorides, always that cation was preferentially taken up which gave rise to a smaller V. Also the rate of displacement of a bulky hydrated ion (e.g. H^+) by a smaller cation (e.g. Na^+) was more rapid than the opposite displacement. Thus, ion-exchange resins have a selectivity toward cations because the lattice of the resins tends to contract and thus small cations are preferred. If π_1 and π_2 are the osmotic pressures in and outside the grain, E_a and E_b are the hydration energies of the active group and the counterions, ϵ is the modulus of elasticity of the resin lattice, and ΔV the increase in V caused by the cation exchange, then $\pi_1 + C(E_a + E_b) = \pi_2 + C\epsilon\Delta V$; C is a const. I. I. Bikerman.

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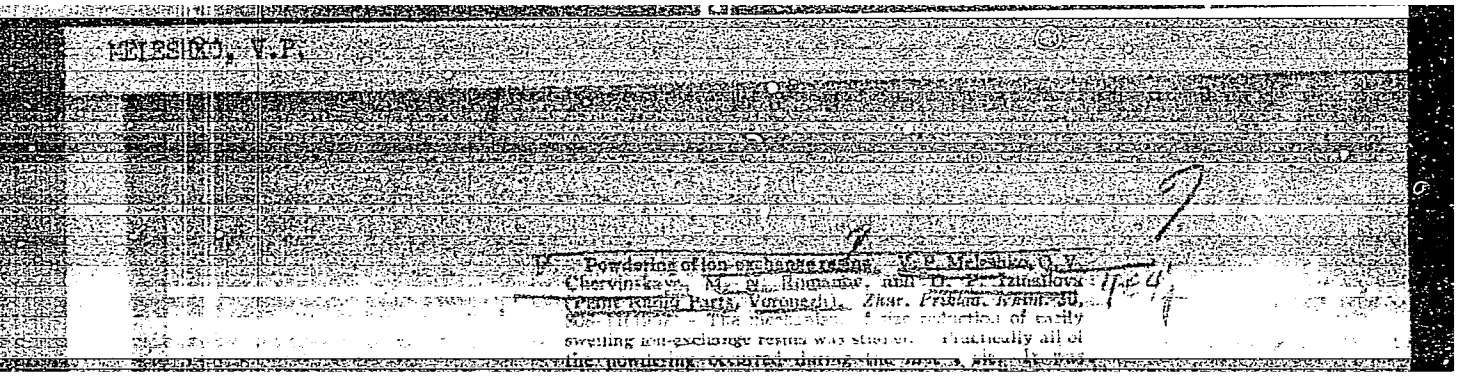

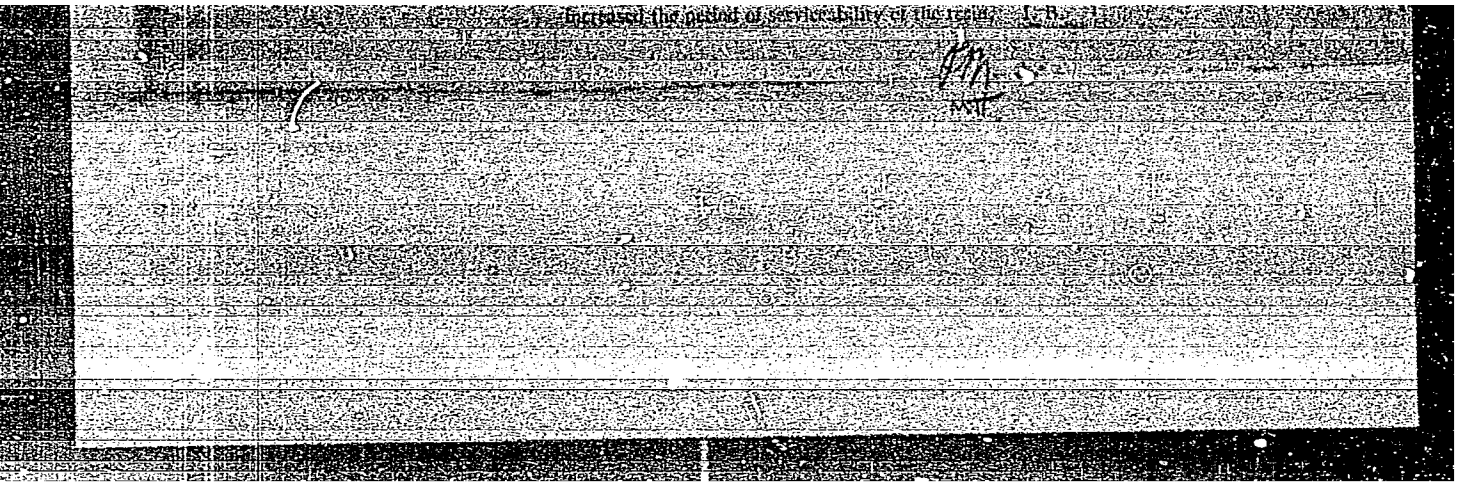

MELESHKO, V.P.

Layer method of computation of ion-exchange filters during concentration of dilute solutions. Trudy VGU 49:55-63 '58. (MIRA 13:5)

(Ion exchange)

VOYTOVICH, V.B.; MELESHKO, V.P.

Verification of the layer theory for computing the processes of cationation of dilute solutions. Trudy VGU 49:65-70 '58. (MIRA 13:5)

(Ion exchange)

MELESHKO, V.P.; PANOVA, L.N.

Theory of the chromatographic removal of electrolyte impurities from salt solutions. Trudy VGU 49:71-77 '58. (MIRA 13:5)
(Salts) (Electolytes) (Chromatographic analysis)

L 17193-63 EWT(m)/BDS AFFTC/ESD-3 RM/JD/JG S/0081/63/000/009/0144/0145
ACCESSION NR: AR3004187

59
58

SOURCE: RZh. Khimiya, Abs. 9G50

AUTHOR: Voytovich, V. B.; Meleshko, V. P.

TITLE: Mechanism of the chromatographic separation of rare earth elements

CITED SOURCE: Sb. tr. Voronezhsk. otd. Vses. khim. o-va im. D. I. Mendeleyeva, vy*p. 2, 1959, 151-157

TOPIC TAGS: rare earth, lanthanide, chromatography, ethylenediaminetetraacetic acid, ion exchange

TRANSLATION: Complexes of the $Ln[LnA]_3^-$ type (Ln -- cation of a lanthanide element, A -- anion of ethylenediaminetetraacetic acid) are formed when ethylenediaminetetraacetic acid solutions of the lanthanides are neutralized to high pH values. Such complexes appear in the filtrate when the column with the Ln form of the cation exchange resin is washed with a solution of ammonium ethylenediaminetetraacetate. The composition of the head fractions of the filtrate depends on the ratio of the concentrations of the elements to be separated

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ACCESSION NR: AR3004187

in the initial solution and the difference in the instability constants of the complexes formed. When the height of the column is sufficiently great, the filtrate contains only that one of the elements to be separated that forms the weakest ethylenediaminetetraacetate complex. When the collector column is combined with a separatory column (filled with the Cu-form of the cation exchange resin), the Cu^{+2} ions hinder the washing out of the front of the sorption zone and promote the obtaining of the heavier lanthanide element in the pure form. N. Polyanskiy.

DATE ACQ: 19Jun63 SUB CODE: CH ENCL: 00

Card 2/2

5(2), 21(5) SOV/153-2-3-4/29

AUTHOR: Meleshko, V. P.

TITLE: Chromatographic Determination of the Purity and Purification of Some Radioisotopes Which Are Used in Chemical Analysis

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 3, pp 328-334 (USSR)

ABSTRACT: Radiochemical preparations which are to be used as "tagged atoms" may contain small amounts of equally radiating isotopes of other elements. For examining the degree of purity the author uses the following principle: the solution with the activity I_o is let through an ion exchanger - cationite or anionite - volume v and activity I of the filtrate are measured. A diagram I/I_o versus v shows a characteristic curve (Fig 1) which is changed by radiating isotopes of different chemical behavior. The following cases were investigated: The fundamental component is adsorbed, the admixture is not adsorbed (Fig 2), the fundamental component is adsorbed more strongly than the admixture (Fig 3), the admixture is adsorbed more strongly (Fig 4). The apparatus which is used in the laboratory of the

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author is represented in a scheme (Fig 5). KU-2 cationite and EDE-1 OP anionite are used as ion exchangers. The experiments were carried out with the isotopes Sr^{89}, Fe^{59}, P^{32} and others. There are 5 figures and 3 Soviet references.

ASSOCIATION: Voronezhskiy gosudarstvennyy universitet-Kafedra analiticheskoy khimii (Voronezh State University - Chair of Analytical Chemistry)

SUBMITTED: May 4, 1958

MELESHKO, V.P.; ZOLOTAREVA, P.I.

Layer method of computation of yield curves in the concentration of dilute solutions by means of ion exchangers. Trudy VGU 57:47-54 '59. (MIRA 13:5)
(Ion exchange)

MELESHKO, V.P.; ALEKHINA, V.A.; PAL'KINA, N.S.

Layer theory of computation of an ion-exchange column for the exchange of two ions of the same valence. Trudy VGU 57: 55-60 -1959 (MIRA 13:5)

(Ion exchange)

MELESHKO, V.P.; MAZO, A.A.

Theory of regeneration of cationite filters. Trudy VGU 57: 61-70 '59. (MIRA 13:5)
(Base-exchanging compounds)

MELESHKO, V.P.; MAZO, A.A.

Regeneration of ion-exchange filters exhausted incompletely.
Trudy VGU 57:71-74 '59. (MIRA 13:5)
(Ion exchange)

MELESHKO, V.P.; SHVETS, M.Yu.

Forecasting the humidity deficit. Trudy GGO no. 114:3-8 '60.
(MIRA 14:2)

(Humidity)

MELESHKO, V.P., kand.khim.nauk

Industrial ion exchange unit for a thorough demineralization of water. Khim.prom. no.1:41-44 Ja-F '60. (MIRA 13:7)
(Water-softening)
(Ion exchange)

MELESHKO, V.P.; ANPILOVA, N.S.; ROMANOV, M.N.; CHERVINSKAYA, O.V.

Economic method of regenerating cation-exchanging filters in thorough desalting of water. Zhur. prikl. khim. 33 no.11:2483-2486 N '60. (MIRA 14:4)
(Base-exchanging substances)
(Filters and filtration)

S/081/62/000/012/033/063
B166/B101

AUTHORS: Meleshko, V. P., Izmaylova, D. R., Chervinskaya, O. V., Povalyayeva, L. P., Zolotareva, R. I.

TITLE: Complete desalting of water on ion-exchange-resin installations of medium capacity

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 12, 1962, 359, abstract 12I310 (Sb. "Issled. v obl. prom. primeneniya sorbentov". M., AN SSSR, 1961, 223-227)

TEXT: On one of the installations for the deep desalting of water the ЭАЭ-10П (EDE-10P) anion-exchange resin was desilicifying the water poorly due to the active groups of the anion-exchange resin being blocked with HCO_3^- ions. It was recommended that the desalting installation be provided with a second degasifier to remove CO_2 residues and with two desilicifying filters in which the loaded EDE-10P anion-exchange resin is regenerated with 0.24 N NaOH and periodically washed through with 0.5 N HCl to remove the HCO_3^-. The desilicifying efficiency and the silicon

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S/081/62/000/012/033/063
B166/B101

Complete desalting of water ...

capacity of the anion-exchange resin were greatly increased when this was done. [Abstracter's note: Complete translation.]

Card 2/2

S/078/61/006/001/002/019
B017/B054

AUTHORS: Meleshko, V. P., Myagkoy, O. N., Bogatyrev, K. S.

TITLE: Interaction Between Deuterium Oxide Solutions and Cationite Resin

PERIODICAL: Zhurnal neorganicheskoy khimii, 1961, Vol. 6, No. 1, pp. 9 - 14

TEXT: The authors studied the possibility of enriching deuterium oxide with the cationite resins Ky-1 (KU-1) and Ky-2 (KU-2). Before use, the resins were transformed into the hydrogen form, thoroughly purified from excess acid, and dried at 125 - 130°C. A 1% deuterium oxide solution was used as initial solution. The contact between resin and solution lasted 24 - 240 hours. It was found that by swelling of the cationites the deuterium oxide was irregularly distributed between the free water and the water bound by active groups of the cationite. The deuterium oxide content was lower in bound water than in water situated in the pores and between the resin grains. 1% D_2O solution was brought into contact with KU-2 at 20° or 100°C for 20 - 48 h, and then fractionated. The deuterium content

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of fractions decreased with decreasing moisture content of the resin. It was found that D_2O concentrated in the outer layer of the hydrate shell of active groups. On the basis of this difference in D_2O concentration in free water and cationite-bound water, the cationite is recommended for enriching deuterium oxide. L. S. Pyaterikova and I. T. Kochkina assisted in the experiments. There are 2 figures, 6 tables, and 7 references: 5 Soviet, 1 US, and 1 Canadian.

ASSOCIATION: Voronezhskiy gosudarstvennyy universitet, Kafedra analiticheskoy khimii (Voronezh State University, Department of Analytical Chemistry)

SUBMITTED: October 1, 1959

MELESHKO, V.P.; VOYTOVICH, I.M.; CHIKIN, G.A.

Ion-exchange sorption of nonsugars and coloring matter from molasses solutions. Sakh. prom. 35 no. 1:30-33 Ja '61.
(MIRA 14:1)

1. Vornezhskiy sovnarkhoz.
(Molasses) (Ion exchange)

MELESHKO, V.P.

Numerical forecast of the dewpoint deficit. Trudy GGO no.124:97-105 '62. (MIRA 17:6)

MELESHKO, V.P.; ANPILOVA, N.S.; ROMANOV, M.N.; CHERVINSKAYA, O.V.

Operation of filters with a mixed-bed ion exchangers. Zhur.prikl. khim. 35 no.1:60-66 Ja '62. (MIRA 15:1)
(Filters and filtration) (Ion exchange resins)

SAPRONOV, A.R.; CHIKIN, G.A.; MELESHKO, V.P.; KLOCHKOVA, T.A.

Sorption of dyeing substances by ion exchangers. Sakh.prom. 36 no.11: 15-17 N '62. (MIRA 17:2)

1. Voronezhskiy tekhnologicheskiy institut (for Sapronov). 2. Laboratoriya ionoobmennykh protsessov Voronezhskogo soveta narodnogo khozyaystva (for Chikin, Meleshko, Klochkova).

MELESHKO, V.P.; YEGOROVA, N.P.

Use of molasses as raw material for the production of glutamic acid. Sakh. prom. 36 no.12:5-6 D '62. (MIRA 16:6)

1. Voronezhskiy gosudarstvennyy universitet.
(Glutamic acid) (Molasses)

GANDIN, L.S.; MELESHKO, V.P.; MESHCHERSKAYA, A.V.

Use of universal digital computers in studying the statistical structure of meteorological fields. Trudy GGO no.143:113-129 '63. (MIRA 17:2)

S/080/63/036/001/014/026
D204/D307

AUTHORS: Meleshko, V.P., Izmaylova, D.R., Chervinskaya, O.V. and Anpilova, N.S.

TITLE: Characteristics of the regeneration of anion-exchanging resins of various types

PERIODICAL: Zhurnal prikladnoy khimii, v. 36, no. 1, 1963, 130 - 134

TEXT: The present work was motivated by the incompleteness and lack of systematization of literature dealing with the above subject, and is concerned with the regeneration of the more important Soviet industrial anionites; AN-1, AN-2F, EDE-10P, AV-16 and AV-17). The AB-16, and AB-17 (AN-1, AN-2F, ЭДЭ-10П, АН-2Ф, resins were prepared by treatment with sat. NaCl, washing with water, packing into a column, threefold successive washing with 0.5 N NaOH, and 0.02 N HCl, and finally by washing with volumes of distilled H_2O per vol. of resin. In the regeneration tests, samples of the resin thus prepared were then packed into

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S/080/63/036/001/014/026
D204/D307

Characteristics of ...

0.8 cm dia x 40 mm long columns and were treated with 0.25, 0.5, 1.0 and 2.0 N NaOH, flow rate being 5 m/hr. The filtrate was titrated for Cl^- with $AgNO_3$. ' Regeneration curves ' of filtrate volume plotted against the Cl^- content were then constructed. The most economic regenerating solution was found to be 0.25 N NaOH for all resins, with the exception of AV-17 for which 0.5 - 1.0 N NaOH should be used. The volumes of regenerator necessary to remove the adsorbed ions varied from 1.25 - 1.5 equivalent volumes for AN-2F, EDE-10P, and AV-16, to 10 equivalent volumes for AV-17. It is considered that the regeneration curves are one of the more important properties in estimating the economic and operating indices of ionites. Application of these results to the deionization of water shows that the preferred ionite would be EDE-10P, in spite of its cost. There are 2 figures and 1 table.

SUBMITTED: November 20, 1961

Card 2/2

L 11436-63 EWT(m)/BDS AFM

ACCESSION NR: AP3001410 S/0020/63/150/004/0842/0844 51 50

AUTHOR: Meleshko, V. P.; Myagkoy, O. N.

TITLE: Permeability of ionic membranes in relation to light and heavy water

SOURCE: AN SSSR. Doklady, v. 150, no. 4, 1963, 842-844

TOPIC TAGS: ionic membranes, heavy water, deuterium oxides, protium oxides, polystyrole sulfate

ABSTRACT: This work was performed to show the connection between the degree of swelling of ion exchange membranes and their penetration in relation to the oxides of deuterium and protium. The ion exchange resins and ionic membranes in their structure do not have pores as such, and the diffusion of water molecules through the membrane is a result of its swelling by means of hydration of active groups and neutralization of its mobile ions. The experimental study of the penetration of membranes was obtained with a polystyrole sulfate cationic membrane in various salt forms. Pure H sub 2 O and pure D sub 2 O and their mixtures containing 25, 50 and 75% D sub 2 O were used. It was found that, with an increase of D sub 2 O in the initial solution, the penetration through the

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L 12416-63

ACCESSION NR: AP3001410

membrane decreases. Thus, the molecules of H sub 2 O penetrate the membrane more readily and the diffused portion of the mixture is partially enriched with protium oxide. With an increase of temperature, the penetration increases and the differences between the penetration of light and heavy water decrease. The penetration of ionic membrane as shown in the graphs is determined by its swelling. It follows that the selective penetration of the ionic membrane with the light water and the effect of non-uniform distribution of H sub 2 O and D sub 2 O in the swelled ionite are of an equal nature. Orig. art. has: 4 figures.

ASSOCIATION: Voronezhskiy gosudarstvennyy universitet (Voronezh State University)

SUBMITTED: 03Mar63 DATE ACQ: 01Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 013 OTHER: 003

Card 2/2

ACCESSION NR: AT4043146 S/2531/64/000/151/0032/0040

AUTHOR: Meleshko, V. P.

TITLE: Numerical forecasting of cloud cover and precipitation with allowance for transformation of an air mass

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy*, no. 151, 1964. Voprosy* chislennogo analiza i prognoza pogody* (Problems in numerical analysis and forecasting), 32-40

TOPIC TAGS: meteorology, weather forecasting, numerical weather forecasting, cloud, precipitation, air mass

ABSTRACT: Until now, the numerical forecasting of cloud cover and precipitation has usually been based on adiabatic models because there are considerable difficulties involved in taking heat and moisture fluxes into account. In this paper the author takes into account the nonadiabatic character of atmospheric processes in numerical forecasting of cloud cover and precipitation. As the initial equations the author uses the equations of moisture and heat transport and the heat balance equation for the underlying surface. In the derivation of prognostic equations the author uses the condition of a thermotropic state

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ACCESSION NR: AT4043146

in the layer from the earth to the 700-mb surface. It is shown that failure to take into account condensation heat fluxes, and especially moisture fluxes, in the cold season of the year can lead to appreciable errors in the forecasting of the cloud cover. This is not true of forecasts of precipitation because at temperatures below 0C the quantity of moisture in the atmosphere is small; therefore, the error in computation of the quantity of condensing moisture plays no significant role. The execution of the required computations on a high-speed computer is described. The preliminary results show that when the nonadiabatic character of atmospheric processes is taken into account there is an appreciable improvement in the forecast of the cloud cover in comparison with an adiabatic forecast for a day in advance. Orig. art. has: 49 formulas and 3 tables.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya, Leningrad (Main Geophysical Observatory)

SUBMITTED: 00 ENCL: 00

SUB CODE: ES NO REF SOV: 009 OTHER: 001

Card 2/2

L 10699-65 EWT(1)/FCC AFETR GW

ACCESSION NR: AT4047190 S/2531/64/000/165/0040/0046

AUTHOR: Meleshko, V. P.; Guseva, L. P.

TITLE: Computation of some statistical characteristics for the temperature and humidity fields

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy*, no. 165, 1964. Primeneniye statisticheskikh metodov v meteorologii (Use of statistical methods in meteorology), 40-46

TOPIC TAGS: meteorology, atmospheric temperature field, atmospheric humidity field, dew point

ABSTRACT: This article is a continuation of the author's earlier investigations of the statistical characteristics of dew point and temperature (see Tr. GGO, No. 114, 1960). The following structural function and autocorrelation functions were used as the principal quantitative characteristics of the statistical structure of the dew point τ and temperature fields

$$b_f(\delta r) = \overline{\left[f(\vec{r}) - f(\vec{r} + \delta\vec{r})\right]^2}, \quad (1)$$

$$m_f(\delta r) = \overline{f(\vec{r})\, f(\vec{r} + \delta\vec{r})}, \quad (2)$$

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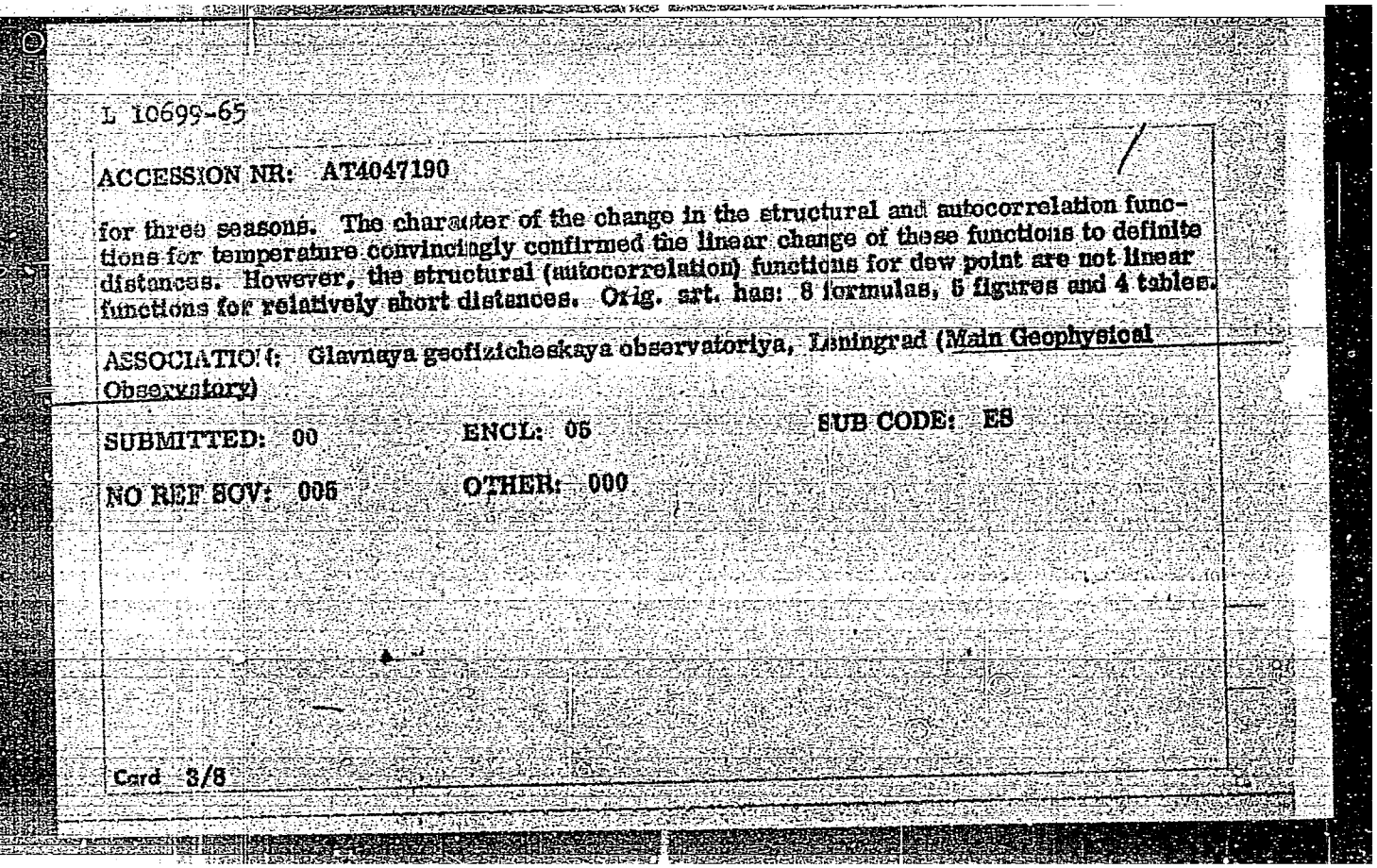
ACCESSION NR: AT4047190

where $f' = f - \bar{f}$, and $\bar{f}$ is the mean of the element f. Here it is assumed that $b_f(r)$ and $m_f(r)$ are homogeneous and isotropic, that is, are determined by only a single argument (distance). It has been demonstrated that the structural function of the geopotential is essentially dependent on season, and it is therefore natural to assume that the structural functions for dew point $b_d(r)$ and temperature $b_T(r)$ can also be different for different seasons. The author has already described a method for computation of the structural functions for dew point and temperature at the 850-mb level and given the results of computation of these functions (Tr. GGO, No. 143, 1963). Following the same method, the author has now computed the structural and autocorrelation functions for temperature at the surface and at the 850- and 700-mb level and dew point temperature at the surface and at the 700-mb level. The computations were made for three seasons. The computation of b(r) and m(r) at one surface for one season required about 25 hours machine time, using a "Ural-1" computer. The number of synoptic situations analyzed considerably exceeded the 50 used in the earlier studies. The values of b(r) and m(r) were computed to a distance of 4,000 km with the "Ural-1" and to 5,000 km on a high-speed computer used in certain of the computations. Figures 1-5 of the Enclosure show the normalized temperature and dew point autocorrelation functions at the earth's surface and at the 700- and 850-mb levels



L 10699-65

ACCESSION NR: AT4047190

for three seasons. The character of the change in the structural and autocorrelation functions for temperature convincingly confirmed the linear change of these functions to definite distances. However, the structural (autocorrelation) functions for dew point are not linear functions for relatively short distances. Orig. art. has: 8 formulas, 5 figures and 4 tables.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya, Leningrad (Main Geophysical Observatory)

SUBMITTED: 00 ENCL: 05 SUB CODE: ES

NO REF SOV: 006 OTHER: 000

Card 3/3

L 10699-65

ACCESSION NR: AT4047190

ENCLOSURE: 01

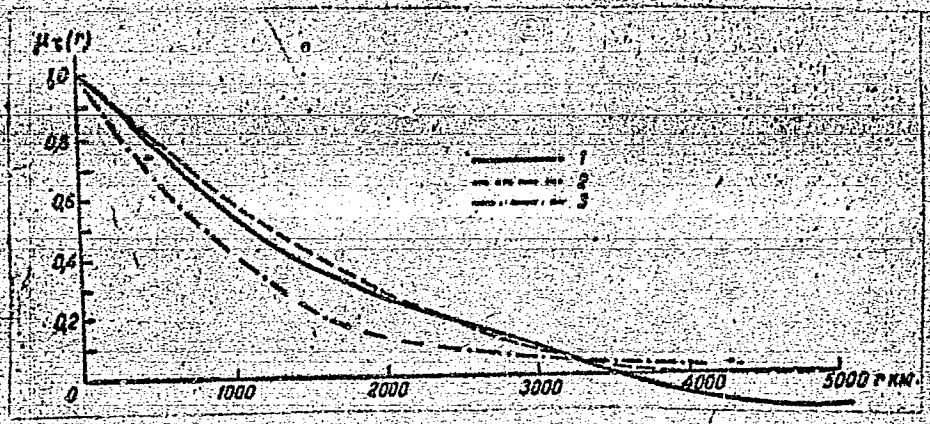


Fig. 1. Normalized autocorrelation functions for dew point temperature at the earth's surface for three seasons: 1) spring; 2) autumn; 3) winter.

Card 4/8

L 10699-63

ACCESSION NR: AT4047190

ENCLOSURE: 01

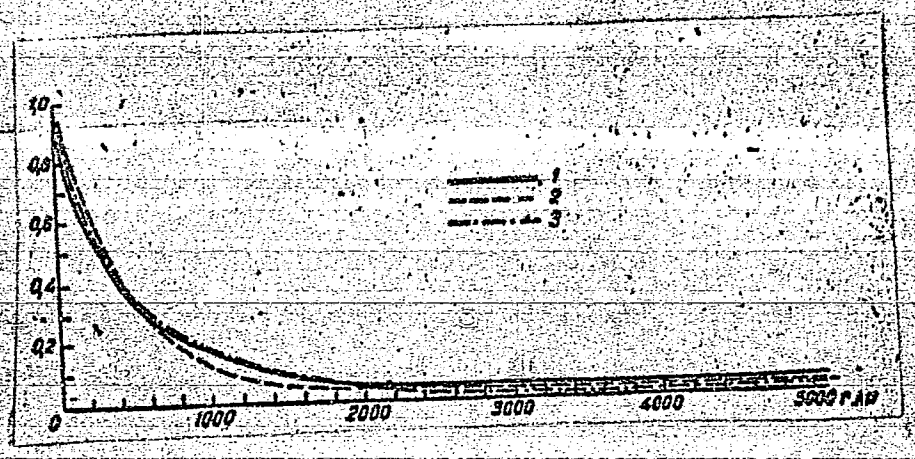


Fig. 2. Normalized autocorrelation functions for dew point temperature at the 700-mb level for three seasons. 1) spring; 2) autumn; 3) winter

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L 10699-65

ACCESSION NR: AT4047190

ENCLOSURE: 03

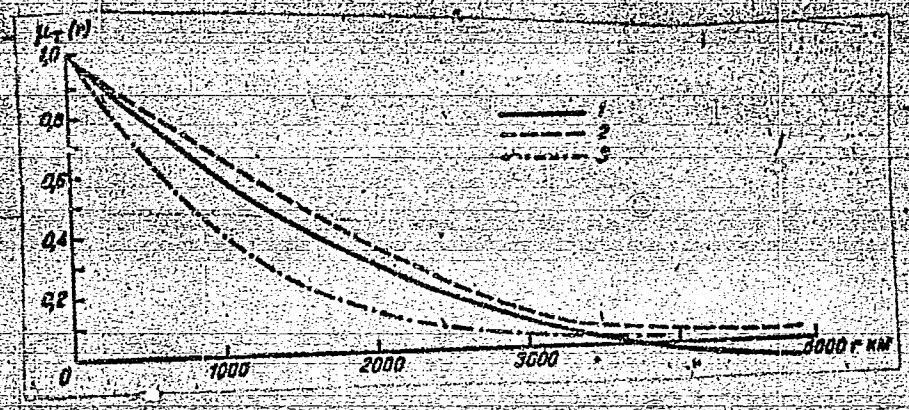

Fig. 3. Normalized autocorrelation functions for temperature at the earth's surface for three seasons. 1) spring; 2) autumn; 3) winter

Card 6/8

L 10699-65

ACCESSION NR: AT4047180

ENCLOSURE: 04

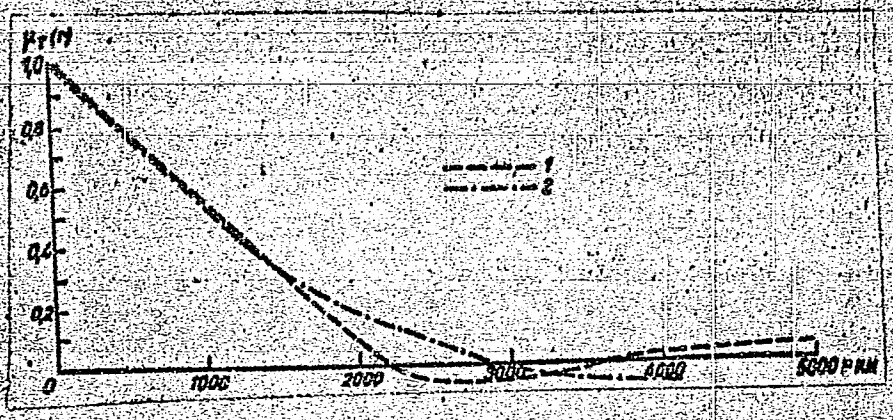

Fig. 4. Normalized autocorrelation functions for temperature at the 850-mb level for two seasons: 1) autumn; 2) winter.

Card 7/8

L 10599-65

ACCESSION NR: AT4047190 ENCLOSURE: 05

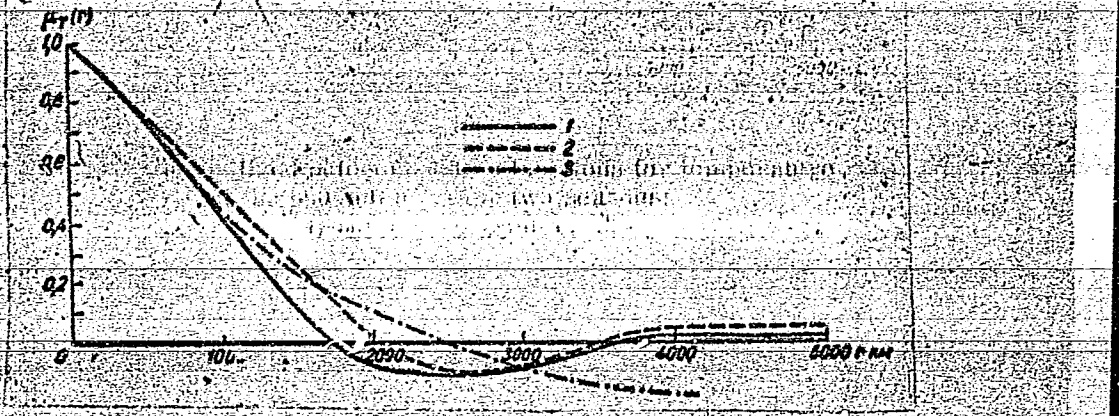

Fig. 5. Normalized autocorrelation functions for temperature at the 700-mb level for three seasons. 1) spring; 2) autumn; 3) winter

Card 8/8

L 61045-65 EWT(m)/EWG(m)/EWP(t)/EWP(b) IJP(c) DS/JD/GS/EM
ACCESSION NR: AT5014244 UR/0000/65/000/000/0042/0048

AUTHORS: Voytovich, V. B.; Maleshko, V. P. 38 B+1

TITLE: On the theory of chromatographic separation of the rare earth elements

SOURCE: AN SSSR. Institut fizicheskoy khimii. Ionoobmennaya tekhnologiya (Ion exchange technology). Moscow, Izd-vo Nauka, 1965, 42-48

TOPIC TAGS: rare earth element, rare earth chelate, chromatography, ion exchanger, ion exchange, ion exchange resin

ABSTRACT: Separation of the pairs of ions Pr-Sm and Pr-Er by the cation exchange resin KU-2 using a 0.5% EDTA (ethylene diamintetracetic acid) solution (pH 7.6) as eluent was studied in order to verify the theoretically derived expressions for the partition constant. The experimental results, shown in the graph, (see Fig. 1 on the Enclosure) are in good agreement with the theory. The theoretical expressions are applied to a three-component system Eu-Y-Er, and good agreement between experiment and theory is observed. A reaction mechanism for the separation process is discussed. Orig. art. has: 4 graphs and 30 equations.

ASSOCIATION: none
SUBMITTED: 26Feb65 ENCL: 01 SUB CODE: IC, GC
NO REF SOV: 013 OTHER: 010

Card 1/2

L 61045-65

ACCESSION NR: AT5014244 ENCLOSURE: 01

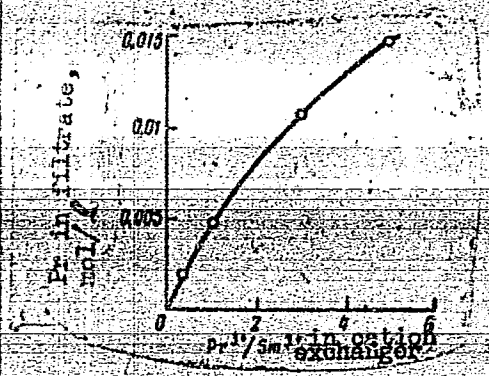

Fig. 1.

The dependence of the Pr concentration in the equilibrium solution on the initial composition in the resin. Solid line calculated according to

$$C_2 = \frac{C}{1 + \frac{K'_H}{K''_H}\frac{A_1}{A_2}},$$

$$C_1 = \frac{C}{1 + \frac{K'_H}{K''_H}\frac{A_2}{A_1}},$$

where C_1, C_2, A_1, and A_2 are the concentration of the ions in the filtrate and resin respectively and K'_H and K''_H are the corresponding instability constants of the complexions. Open circles - experimental results.

Card 2/2

KOTLYAR, D.K.; MUQUYEV, G.D.; MELEZHIK, V.P.

In the State Committee of the Council of Ministers of the Ukrainian S.S.R. for the coordination of scientific research. Met. i gornorud. prom. no.3:83-85 My-Je '65.
(MIRA 18:11)

SHVETS, M.Ye.; MELESHKO, V.P.

Numerical algorithm for the solution of a system of equations describing the hydrodynamics of the atmosphere. Izv. AN SSSR. Fiz. atm. i okeana 1 no.9:893-896 S '65. (MIRA 18:9)

1. Glavnaya geofizicheskaya observatoriya imeni Voyeykova.

MELESHKO, Ye.A.

C-2

USSR/Nuclear Physics - Instruments and Installations
Methods of Measurement and Investigation

Abs Jour : Referat Zhur - Fizika, No 1, 1958, 242

Author : Korshunov, Yu.V., Meleshko, Ye.A., Panosyuk, V.S.

Inst : Institute of Atomic Energy, Academy of Sciences, USSR.

Title : Instrument for Observation of the Distribution of Current of Accelerated Ions on a Cyclotron Target.

Orig Pub : Pribory i tekhn. eksperimenta, 1957, No 2, 23-24

Abstract : To determine the distribution of current in a beam of accelerated ions over the area of the target, one employs usually a special probe, consisting of 10 -- 15 laminas, grounded through calibrated resistances, on which one measures by means of an indicator in sequence the voltage drop due to the current of accelerated ions. The authors describe a circuit, with which it is possible to observe

Card 1/2

SOV-120-58-1-7/43

AUTHORS: Antonov, A. V., Korshunov, Yu. V., Meleshko, Ye. A. and Panasyuk, V. S.

TITLE: Stabilisation of the High Frequency Voltage on the Dee of a Cyclotron (Stabilizatsiya napryazheniya vysokoy chastoty na duante tsiklotrona)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1958, Nr 1, pp 41-46 (USSR)

ABSTRACT: Nuclear reaction studies which are being carried out at the present time require high stability in cyclotron parameters. The following quantities require stabilisation: intensity of the magnetic field, frequency of the h.f. voltage which is applied to the dee, amplitude of the h.f. voltage on the dee and the magnitude of the reflecting potential. It is also desirable to stabilise the ion current from the source. Thus the stabilisation of the dee potential must be looked upon as one of a set of problems associated with the stabilisation of the cyclotron parameters. A comprehensive dee voltage stabilisation should include a stabiliser of the dee voltage relative to the earth as well as

SOV-120-58-1-7/43

Stabilisation of the High Frequency Voltage on the Dee of a Cyclotron.

an inter-dee voltage stabiliser. A description is given of the principle and a circuit of an amplitude stabiliser for the h.f. voltage on one of the dees. The stabiliser can be used either continuously or with a modulated signal. The circuit diagrams are given in Figs.3 and 5. The h.f. voltage stabiliser was applied to the "attracting" dee and was tested on a working machine. Introduction of the stabiliser led to a real improvement in the stability of the ion beam at the cyclotron target. In addition, destabilising factors such as random surges are eliminated which ensures smooth running of the machine. The regulation characteristic is given in Fig.4. I. P. Vyazovetskiy, D. A. Kuznetsov, V. Z. Loskutov, R. A. Ariskina, B. V. Rybakov and V. A. Sidorov collaborated. There are 5 figures and 7 Soviet references.

SUBMITTED: June 15, 1957.

1. Voltage stabilizers--Performance 2. Voltage stabilizers--Circuits
3. Cyclotrons--Equipment

Card 2/2

S/058/61/000/007/007/086
A001/A101

AUTHORS: Antonov, A.V., Korshunov, Yu.V., Meleshko, Ye.A., Nemenov, L.M., Panasyuk, V.S.

TITLE: Ferrite frequency changer for conversion of a cyclotron to the phasotron system of acceleration

PERIODICAL: Referativnyy zhurnal. Fizika, no. 7, 1961, 37-38, abstract 7B34 (V sb. "Uskoriteli", Moscow, Atomizdat, 1960, 60 - 72)

TEXT: In order to bring about the proposal on the conversion to the phasotron operation of acceleration of the mass-produced cyclotron with the diameter of electromagnet poles 1,200 mm and to produce 30-Mev protons (instead of 12.6 Mev) in it, the frequency in the acceleration process must be changed by about 5%. The authors have constructed, for modulation of cyclotron frequency, a circuit with ferrite core and radio engineering equipment connected with it. The change of resonance frequency of the dee circuit is brought about by connecting with it an inductance with ferrite core and excitation of the core by alternate current with a frequency equal to that of acceleration cycles. The problem of selecting the ferrite and the method of connecting the circuit with the fer-

Card 1/2

Ferrite frequency changer ...

rite are discussed. The equipment was tested by acceleration of deutrons. Frequency variation in this case amounted to 1.8%. At the final diameter the average stream of deutrons with 2 - 3 μamp was obtained. The current pulse amounted to 60 - 90 μamp.

A. Talyzin

[Abstracter's note: Complete translation]

Card 2/2

33137
S/120/61/000/006/003/041
E032/E114

24670

AUTHORS: Korshunov, Yu.V., and Meleshko, Ye.A.

TITLE: A magnetic ring for the measurement of ion current in a beam extracted from a cyclotron

PERIODICAL: Pribory i tekhnika eksperimenta, no.6, 1961, 24-26

TEXT: The beam current measuring device described by the present authors is similar in principle to those described by L. Bess and A.O. Hanson (Ref.1: Rev. Scient. Instrum., 1948, 19, 108) and I.A. Grishayev, N.I. Mocheshnikov and V.F. Ivanov (Ref.2: PTE, 1960, no.4, 17). The present device includes a ferrite core. The beam passes freely through it and the device has no effect upon it. The principle of the device is illustrated in Fig.1, in which 1 is the ion beam, 2 is the magnetic ring, 3 the amplifier, and 4 the output meter. A schematic drawing of the detector itself is shown in Fig.2 (1 - envelope, 2 - teflon insulator, 3 - magnetic ring, 4 - retaining ring, 5 - flange of ion beam pipe, 6 - lead diaphragm). The magnetic ring is made of НЦ-800 (NTs-800) ferrite (μ = 800) and carries 5 turns of copper deposited directly upon it. The outer diameter of the ring is

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120 mm, the inner diameter is 85 mm. At high frequencies (10 Mc/sec or more) there is considerable damping in the circuit formed by the ring and the capacitance to earth C (Q ~1.5-2). This means that the device can be used in a wide frequency range without retuning. Two types of amplifier were employed. The first was a tuned amplifier with a bandwidth of 4 Mc/sec, and the second was a narrow band device based on the superheterodyne principle. The former had the disadvantage of high noise level and was used for large currents; the latter was designed for small currents. Currents of the order of 1 microampere or more can be measured to an accuracy of about 5%. Lower accuracy obtains at lower currents. Preliminary experiments on the irradiation of the ferrite by deuterons (1 μamp/cm^2 at 19.6 MeV for 12 hours) showed that the ferrite was practically unaffected by the irradiation. However, it is stated that this is only a preliminary result.

Acknowledgments are expressed to V.S. Panasyuk for suggesting this subject and to A.V. Antonov for discussions and advice.

There are 2 figures and 5 references: 4 Soviet-bloc and 1 non-Soviet-bloc.

X

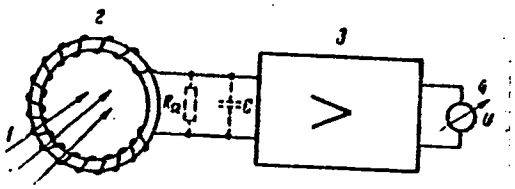
33137
A magnetic ring for the measurement ... S/120/61/000/006/003/041
E032/E114

The English language reference is as quoted in the text above.

ASSOCIATION: Institut atomnoy energii AN SSSR
(Institute of Atomic Energy, AS USSR)

SUBMITTED: March 21, 1961

Fig. 1



Card 3/3

X

ANTONOV, A.V.; KORSHUNOV, Yu.V.; MELESHKO, Ye.A.; NEMENOV, L.M.; PANASYUK, V.S.;

[Ferrite frequency variator for changing from a cyclotron to a synchro-cyclotron mode of acceleration] Ferritovyi variator chastoty dlia perevoda tsiklotrona v fazotronnyi rezhim uskoreniia. Moskva, Glav. upr. po ispol'zovaniiu atomnoi energii, 1960. 18 p.
(MIRA 17:2)

Meleshko, E.P.

1

Phase composition of Kerch iron ore. P. T. Danil'chenko, E. P. Tereshchuk, and E. P. Meleshko. *Trudy Krym. Filiala, Akad. Nauk S.S.S.R.*, No. 1, 13–23 (1953).—The principal component of Kerch Fe ore is $Fe_2O_3.1.5H_2O$. SiO_2 was present as a hydrate near H_4SiO_4. V. N. B.

2

MELESHKO, E. P.

Viscosity and specific heat of sea water and natural brines. A. M. Ponizovskii, E. P. Meleshko, and N. I. Glubina. *Trudy Krym. Filiala, Akad. Nauk S.S.S.R.* 4, No. 1, 75–80 (1953).—Isotherms of viscosity were detd. for natural brines at 10°, 20°, and 30° and for NaCl soln. at 20°. With increasing concn. relative viscosity increased most rapidly at the lowest temp. Viscosities of NaCl solns. were slightly lower than those of brines with corresponding %S (salinity). With decreasing temp., relative viscosity increased most rapidly at the highest %S. Sp. heat of brines was expressed by $C = 1 - 0.01307S$, where C = sp. heat and S = % salinity. Quant. compn. of brines (% $MgCl_2$, etc.) did not seem to affect this relation. Salinity was detd. by refractometer or the fluoride method. Eurilla Mayerle

MELESHKO, Ye. P.

PONIZOVSKIY, A.M.; MELESHKO, Ye.P.

On the geochemistry of boron in salt reservoirs of the Crimea [with summary in English]. Geokhimiia no.7:642-644 '57. (MIRA 11:1)

1. Institut mineral'nykh resursov AN USSR, Simferopol'.
(Crimea--Boron)

PONIZOVSKIY, A.M.; MELESHKO, Ye.P.; VLADIMIROVA, N.M.

Hydrochemistry of salt lakes in the Kerch Peninsula.
Izv.vys.ucheb.zav.;geol.i razv. 3 no.2:125-134 F '60.
(MIRA 15:5)

1. Institut mineral'nykh resursov AN USSR.
(Kerch Peninsula--Salt deposits--Analysis)

PONIZOVSKIY, A.M.; MELESHKO, Ye.P.

Physicochemical investigations of the Perekop salt lakes. Zhur. neorg.khim. 5 no.6:1329-1336 Je '60. (MIRA 13:7)
(Perekop Lakes)

33148
S/120/61/000/006/016/041
E032/E114

26.2312

AUTHORS: Bolotin, L.I., Markin, P.S., and Meleshkov, S.I.

TITLE: A pulse source of multiply charged ions with magnetic beam separation

PERIODICAL: Pribory i tekhnika eksperimenta, no.6, 1961, 86-88

TEXT: The source is capable of producing multiply charged ions with energies up to 40 kV, focussed into a spot 15 mm in diameter. The beam currents are as follows: 1.4 mA (N^{+4}), 1.5 mA (N^{+3}), 2 mA (N^{+2}). The multiply charged ions are produced in the plasma of a high-power arc discharge. The source is illustrated schematically in Fig.1a (1 - stainless steel, 2 - porcelain, 3 - titanium). The anode is made of copper and the cathode of titanium. Water cooling is not necessary. The anode is insulated from the cathode by porcelain insulators and the position of the stainless steel extractor can be adjusted without releasing the vacuum. The discharge chamber is placed in a magnetic field of 4000 Oe produced by 100° sector electromagnet with a gap of 10 cm (average radius of ion trajectory 15 cm).

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A pulse source of multiply charged...

The symmetric disposition of the cathode relative to the anode leads to a longitudinal oscillation of the ionizing electrons which reach their maximum energy at the mid-point of the discharge channel (length 40 mm, diameter 8 mm). The slit through which the ions are extracted (15 x 2 mm) is placed in the latter position. The location of the source in the magnetic field is such that the extracted ions will have travelled through one quadrant when they leave the magnetic field in the 90° focal plane. Thus, ions with equal e/m have parallel trajectories, which facilitates the subsequent formation of the beam. The discharge is excited by 10 kW square pulses. The extraction is achieved by means of 40 kW square pulses. The discharge and extracting pulses are synchronized with the aid of a two-channel delay line. The system is evacuated by two diffusion pumps M-1000 (M-1000) (3×10^{-6} mm Hg in the accelerating tube).
There are 3 figures, 1 table and 3 references: 1 Soviet-bloc and 2 non-Soviet-bloc. The English language references read as follows:

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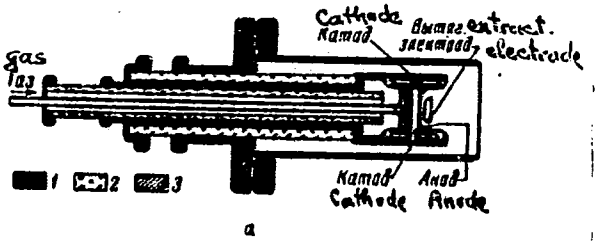
A pulse source of multiply charged .. S/120/61/000/006/016/041
E032/E114

Ref.1: R.J. Jones, A. Zucker.
Rev. Scient. Instrum., 1954, v.25, no.6, 562.
Ref.2: C.E. Anderson, K.W. Ehlers.
Rev. Scient. Instrum., 1956, v.27, no.10, 809.

SUBMITTED: April 28, 1961

Fig.1a



a

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MELESHKOV, S.I.

33149
S/120/61/000/006/017/041
E032/E114

26.2310

AUTHORS: Belotin, L.I., Markin, P.S., Kulygin, Yu.F., Skoromnyy, G.M., and Meleshkov, S.I.

TITLE: A spark source of multiply charged ions

PERIODICAL: Pribory i tekhnika eksperimenta, no.6, 1961, 88-90

TEXT: A.A. Plyutto, K.P. Kervalindze and I.F. Kvartskhava (Ref.2: Atomnaya energiya, v.3, no.8, 1957, 153) have described a spark source producing large currents of multiply charged ions of various elements with a total ion current of 1 amp. The aim of the present work was to improve the spark source so that it can be used to obtain large currents of N^{+4} and C^{+4}, suitable for injection into a linear accelerator. The source is illustrated schematically in Fig.1 and differs from that described in Ref.2. The spark discharge takes place in the AlN channel, which means that one can use both positive and negative half-periods of the oscillatory circuit supplying the spark, and exclude ions of elements present in the porcelain tube. During a high-power discharge, the products of decomposition of AlN

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are ionized and set up a pressure in the channel, which ejects the plasma into the solenoid. The discharge current passing through the solenoid produces an axial magnetic field which prevents ion diffusion in the plane perpendicular to the magnetic field. The ions are extracted by a voltage of 15 to 20 kV. The beam is then focussed by an electrostatic lens and is accelerated to 50 keV. The pressure in the system is maintained at 10^{-6} mm Hg. It was found that with a frequency of 10 kc/sec the following currents could be produced:

200 μA (C^{+3}), 300 μA (C^{+3}), 300 μA (N^{+3}), 200 μA (O^{+3}). At $f = 5 \times 10^5 - 10^6$ cps (spark length 10-15 μsec) the ions N^{+4} and N^{+5} were found to appear. Fig.2 shows a typical spectrum obtained with V_c = 38 kV, L = 5 μH and C = 0.02 μF. The ion spectrum obtained from the spark source contains 22 components and 30% of the total current is due to nitrogen ions. The energy spread of the ions is about 2 to 3 keV and depends on the spark discharge potential difference. The performance of the source depends on the number of pulses which it has produced. After 10^6 pulses the total ion current decreases by a factor of 5.

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A spark source of multiply S/120/61/000/006/017/041
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The maximum current which can be obtained with the AlN discharge channel is 15 mA. The source produced 100 μA of N^{+4} in a pulse of 15 μsec and 300 to 500 μA of N^{+3} and C^{+3} in a pulse of 500 μsec. The power consumed by the source and the ion-optical system is 500 W. The present results differ from those reported in Ref.2. The difference is ascribed to the fact that the present authors measured the true current (i.e. the current beyond the focusing system and the accelerating tube). There are 4 figures and 5 references: 2 Soviet-bloc and 3 non-Soviet-bloc. The English language references read as follows:

Ref. 3: W. Bleakney, Phys.Rev., 1929, v.34, 157.
Ref. 4: W. Bleakney, Phys.Rev., 1930, v.35, 139.
Ref. 5: W. Bleakney, Phys.Rev., 1930, v.36, 1303.

SUBMITTED: April 28, 1961

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ACC NR: AP7004152 SOURCE CODE: UR/0375/67/000/001/0052/0056

AUTHOR: Churov, Ye. P. (Professor; Doctor of technical sciences; Engineer; Captain 1st rank); Zakolodyazhnyy, V. P. (Candidate of technical sciences; Captain 2d rank); Meleshuk, B. V. (Candidate of technical sciences; Captain 2d rank)

ORG: none

TITLE: Ship navigation problems . Analytical methods of computation of observed coordinates

SOURCE: Morskoy sbornik, no. 1, 1967, 52-56

TOPIC TAGS: ship navigation, electronic computer, digital computer

ABSTRACT: Methods of computer processing of information supplied by the shipboard navigation instruments in order to determine the position of a ship at sea is discussed. The advantages and shortcomings of the method of direct calculation of coordinates at an observed point and those of the generalized method (approximate from a mathematical point of view) of the lines of position are compared and discussed. Various authors who are in favor of the first method are quoted and criticized. The authors of the article stress the advantages of the second method,

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ACC NR: AP7004152

while admitting the utility of the first. They believe that the generalized method of lines of position should be preferred for practical navigation purposes. Orig. art. has: 1 figure. [GC]

SUB CODE: 09, 13/SUBM DATE: none/ORIG REF: 004/

Card 2/2

M

USSR/Cultivated Plants - Grains

Abs Jour : Ref Zhur Biol., No 12, 1958, 53538

Author : Meleskins, A.
Inst :
Title : A Promising Variety of Winter Wheat

Orig Pub : Padonju Latv. kolchoznieks, 1957, No 7, 22 Kolkhoznik Sov. Latvii, 1957, No 7, 21

Abstract : This article gives data on the variety trials of 36 varieties of winter wheat on 6 variety testing plots. The most promising ones are: Kursas, Wheat-couchgrass hybrid 1 and Wheat-couchgrass hybrid 599. Priyekul'sk Experimental Station brought out medium Ripening variety Priyekul'skaya 481; the absolute weight of the grains is 36-42 g; it does not damp off and has medium resistance to diseases. The milling and bread baking qualities are medium. With regard to winter resistance and yield, it surpasses the control varieties - Wheat-couchgrass hybrid 1 and Kursas. -- A.F. Khlystova

Card 1/1

MELETINSKIY, Ye. M.

"Pervobytnoye naslediye v arkhaicheskikh eposakh."

report submitted for 7th Intl Cong, Anthropological & Ethnological Sciences, Moscow, 3-10 Aug 64.

H.

POLAND/Chemical Technology - Processing of Solid Fuels (Naturally Deposited).

Abs Jour : Ref Zhur - Khimiya, No 16, 1958, 55084

Author : Maletsky, Zyulkovsky, Neytaler.
Inst : -
Title : The Use of Chemicals in the Prevention of Coal and Sand from Freezing Together.

Orig Pub : Przegl. gorniczy, 1957, 13, No 11, 566-568

Abstract : The experimental data and practical instructions are given for the use of aqueous solutions or solid calcium chloride for preventing coal and sand from freezing together in railroad cars. Operational details are given for wetting the coal and sand with the above mentioned chemicals during the loading procedure. An approximate equation is given for calculating the amount of calcium chloride required.

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